

© EPODOC / EPO

PN - DE4330386 A 19950309  
PD - 1995-03-09  
PR - DE19934330386 19930908  
OPD - 1993-09-08  
TI - Switched reluctance motor  
AB - Low currents in the motor and in the inverter (25) are achieved in a switched reluctance motor having a large rotation speed range in that each phase winding (17/18, 19/20, 21/22) has a tap (53, 55, 57) located approximately in its centre, which tap (53, 55, 57) is connected on the one hand via a freewheeling semiconductor switch (65, 67, 69) to one (71) of the poles, and on the other hand via an additional switching transistor (59, 61, 63) to the other pole (73) of the DC voltage source (23). This centre tap (53, 55, 57) does not become effective until after the rotor reaches a specific rotation speed. The reluctance motor is distinguished by low losses and by more cost effective rating of the components.

&lt;IMAGE&gt;

IN - LINDIG CHRISTIAN (DE)  
PA - LICENTIA GMBH (DE)  
EC - H02P7/05E  
IC - H02P6/00  
CT - DE2813784 C2 [ ]; DE2030663 A [ ]; EP0531792 A2 [ ]  
CTNP- [ ] Weh: Elektrische Netzwerke und Maschinen in  
Martizendarstellung. BI Mannheim/Zürich 1968, S. 120 u. 124

© WPI / DERWENT

TI - Switched reluctance motor with centre-tapped three-phase stator coils - produces higher torque with reduced inverter power dissipation by speed-dependent switching-out of portion of each coil  
PR - DE19934330386 19930908  
PN - DE4330386 A1 19950309 DW199515 H02P6/00 005pp  
PA - (LIGN) LICENTIA PATENT-VERW GMBH  
IC - H02P6/00  
IN - LINDIG C  
AB - DE4330386 Each of the phase windings (17/18, 19/20, 21/22) connected between small and inexpensive power semiconductor switches (e.g. 27, 29) of an inverter circuit (25) has a centre tap (53) connected to the positive DC supply terminal (71) by a free-wheel

diode (65), and to the negative terminal (73) through a switching transistor (59).

- A microprocessor performs this switching when a predetermined rotational speed or torque is attained, so that e.g. with half of the stator pole windings switched out a higher torque is achieved in a simple manner. This also reduces the current consumption and inverter losses.
- USE/ADVANTAGE - For the electrically propelled vehicles, washing machines, lawnmowers etc., and for positioning drives in vehicle fans and impellers; the motor exerts sufficient torque throughout a wide range of speeds with high efficiency.
- (Dwg.2/3)

OPD - 1993-09-08

AN - 1995-107941 [15]

